

What is claimed is:

1. A power supply device comprising:
  - a switching element connected between two different potentials;
  - an output smoothing section for smoothing a voltage outputted from a terminal of the switching element and producing an output voltage provided for a load;
  - a driver section for driving and controlling the switching element; and
  - an output current sensing section for monitoring current flowing through the load, the output current sensing section provided in a stage after the output smoothing section,wherein, when a desired output voltage is produced from an input voltage, the switching element is driven and controlled by the driver section by incorporating a monitored result obtained by the output current sensing section.

2. A power supply device as claimed in claim 1,  
wherein the driver section includes:
  - an error amplifier for amplifying a voltage difference between a first monitored voltage which varies according to the output voltage and a predetermined reference voltage so as to produce an error voltage;
  - a comparator for producing a comparison signal by comparing between a second monitored voltage which varies according to a driving current flowing through the switching element and the error voltage;
  - a driving signal generating section for generating a driving signal for driving

the switching element in accordance with the comparison signal; and  
an offsetting section for providing an offset in accordance with a result monitored by the output current sensing section either for the second monitored voltage before the second monitored voltage is inputted to the comparator or for the error voltage before the error voltage is inputted to the comparator.

3. A power supply device as claimed in claim 2,  
wherein the driving signal generating section comprises a reset-priority-type RS latch circuit having a reset terminal for receiving the comparison signal, a set terminal for receiving a clock signal, and an output terminal for outputting the driving signal.

4. A power supply device as claimed in claim 2,  
wherein the output current sensing section comprises a sensing resistor.

5. A power supply device as claimed in claim 4,  
wherein the offsetting section includes an amplifier for amplifying a voltage across the sensing resistor and a variable DC voltage source for providing an offset voltage in accordance with an output voltage of the amplifier for either the second monitored voltage or the error voltage.

6. A liquid crystal display device comprising:  
a liquid crystal display;  
a data signal generating section for generating a data signal for the liquid

crystal display; and

a power supply device for supplying power to the data signal generating section, the power supply device comprising:

a switching element connected between two different potentials;

an output smoothing section for smoothing a voltage outputted from a terminal of the switching element and producing an output voltage provided for a load;

a driver section for driving and controlling the switching element; and

an output current sensing section for monitoring current flowing through the load, the output current sensing section provided in a stage after the output smoothing section,

wherein, when a desired output voltage is produced from an input voltage, the switching element is driven and controlled by the driver section by incorporating a monitored result obtained by the output current sensing section.